NWS FORM E-5 (11-88) **(PRES. by NWS Instruction 10-924)** **U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE**	HYDROLOGIC SERVICE AREA (HSA) **WFO Jackson, Mississippi**
MONTHLY REPORT OF HYDROLOGIC CONDITIONS	REPORT FOR: MONTH **December** YEAR **2014**
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283	SIGNATURE **Alan E. Gerard, Meteorologist In-Charge** DATE **1/16/2014**

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

X **An X inside this box indicates that no river flooding occurred within this hydrologic service area.**

Synopsis...

This December was a fairly warm month compared to normal Decembers. The average temperature at all ASOS (Automated Surface Observing System) sites was at least 2-3 degrees above normal. In regards to precipitation, Hattiesburg and Meridian received between 1.5-3 inches above normal rainfall. All other sites received below normal rainfall. Despite the above normal rainfall in southeast Mississippi, the Drought Monitor is still showing that area in D0 (abnormally dry) drought.

The month started off with a cold front passing through the state on the 1st. Only scattered showers fell in Louisiana and the Mississippi Delta at this time. Then, on the 6th, another cold front pushed through the area and dropped 2 to 3 inches of rain in the HSA's (Hydrologic Service Area) northernmost tier of counties where minor to moderate river rises occurred. After a few days of quiet weather, an upper shortwave generated some light showers again on the 12th, this time in the Louisiana parishes and Arkansas counties.

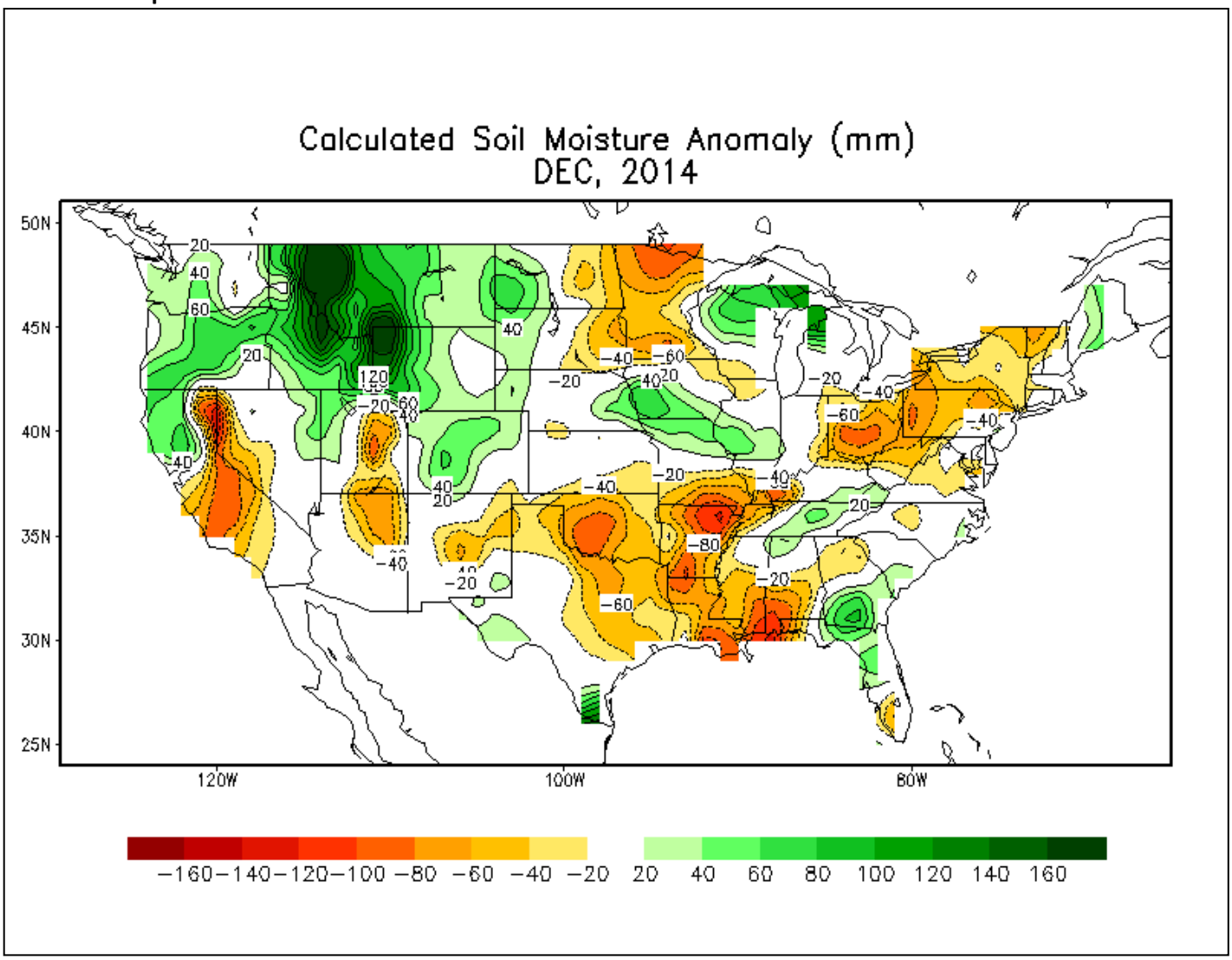
On the 16th, a strong cold front overtook the area and brought up to a half inch of rainfall to the southwest HSA. This front quickly pushed to the east. An upper low pressure then formed along the Gulf coast of South Texas on the 18th and brought a warm front to the northern Gulf Coast on the 19th. This warm front triggered showers in South Mississippi on the 19th and then heavier showers on the 20th. Counties in South Mississippi received up to 1.5 inches of some much-needed rainfall with this system.

Prior to the 23rd, the low-level flow rotated to the south and allowed an ample warm-up in temperatures. As a cold front approached the area on the 23rd, severe weather broke out ahead of the front with six tornadoes reported in Southeast Mississippi, including an EF-3 in Columbia. When the front actually passed through on the 24th, areas in the eastern HSA received as much as 4-5 inches of rainfall. This system did not cause any flash flooding due to the previous dry conditions, but in addition to the system which passed through on the 28th, minor flash flooding in cities and low areas did occur. The cold front which passed through on the 28th dropped 2-3 inches on the same area which had just experienced 4 inches. Rivers experienced minor to moderate rises across portions of the Pearl River in Central Mississippi and the Pascagoula River tributaries in Southeast Mississippi.

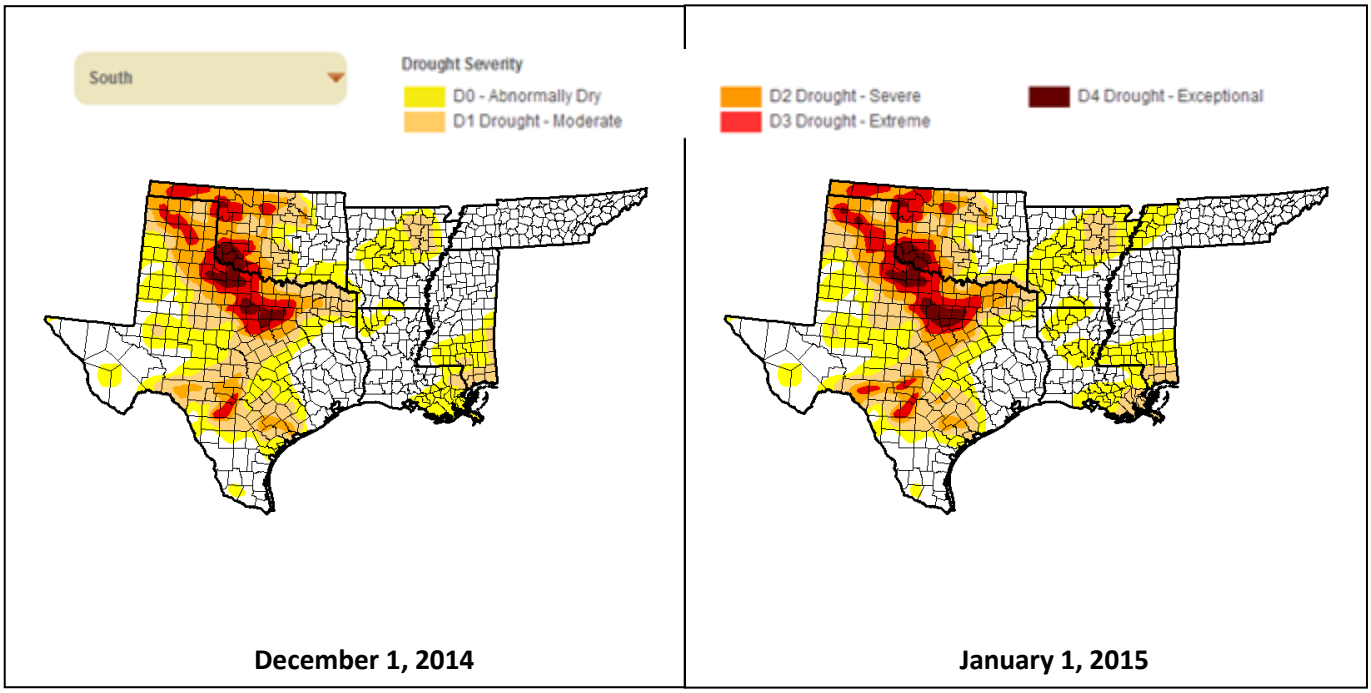
The remaining days of the month and year were fairly quiet.

River and Soil Conditions…

Soil Moisture Map:



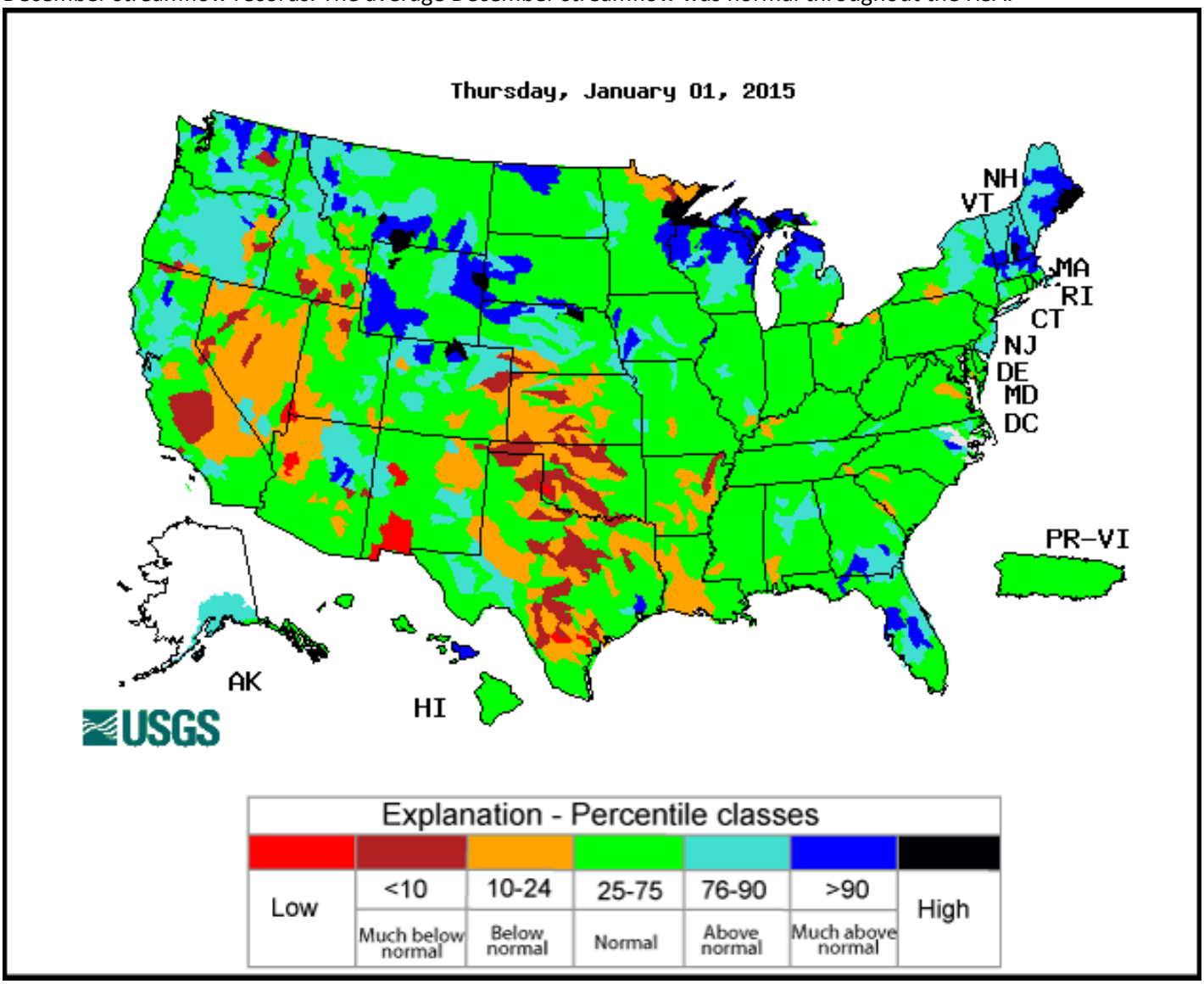
Drought Comparison:



December 1, 2014 | **January 1, 2015**

Streamflow:

The United States Geological Survey's (USGS) December 2014 river streamflow records were compared with all historical December streamflow records. The average December streamflow was normal throughout the HSA.



River Conditions:

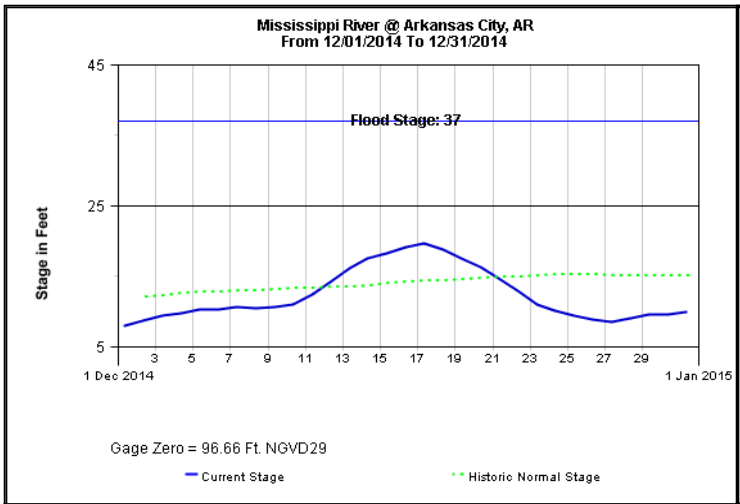
No flooding occurred along the river systems in the HSA this month. For the conditions of the Mississippi River from Arkansas City to Natchez, refer to the hydrographs on the next page.

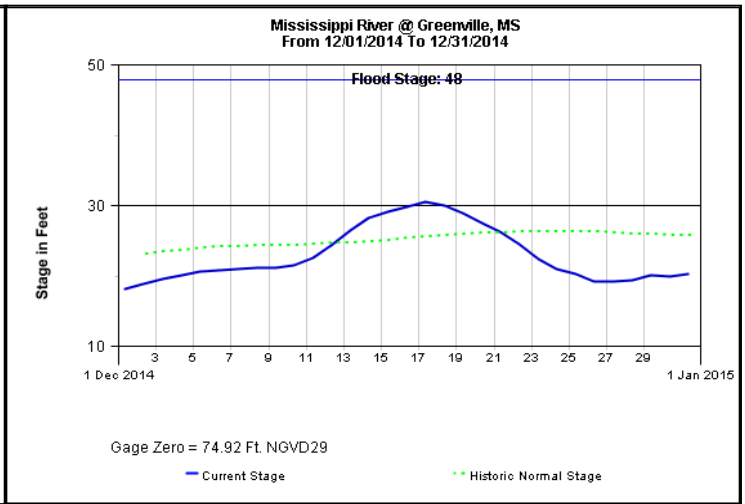
Climatic Outlook and Flood Potential:

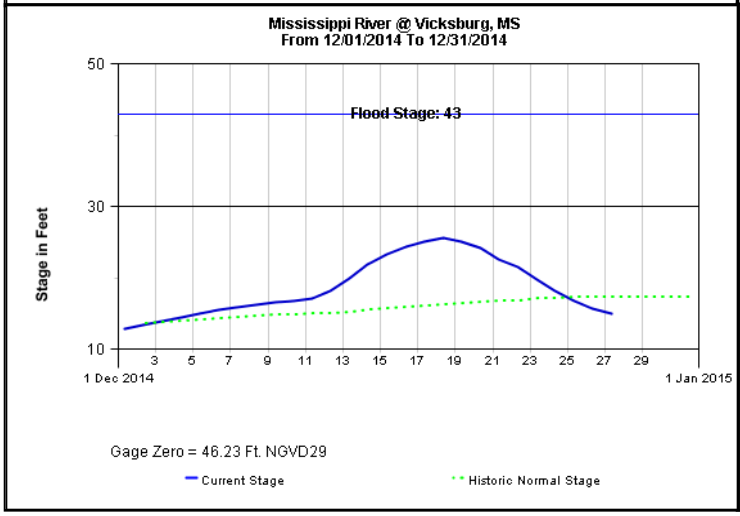
The climatic outlook predicts below normal temperatures over the next three months for the entire HSA. In regards to precipitation, the outlook shows equal chances for above and below normal precipitation amounts over the next three months for the entire HSA. Thus, based on current soil moisture, streamflow, and the 3-month weather outlook, the flood potentials are as follows:

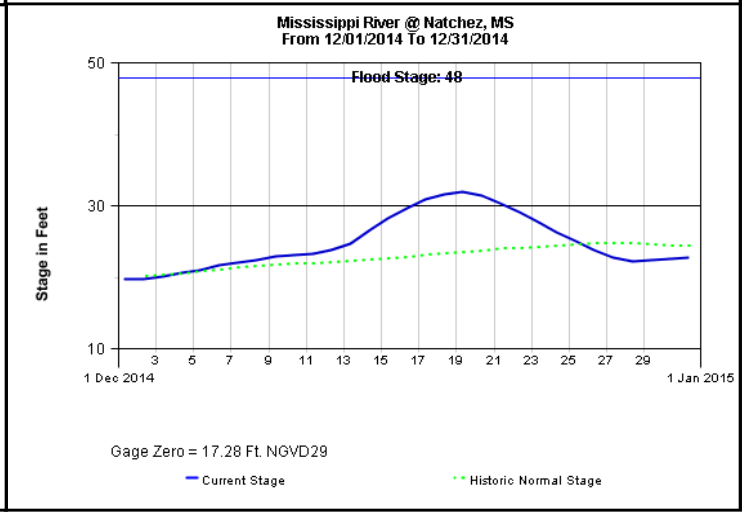
Pearl River System: Average.
Yazoo River System: Average.
Big Black River System: Average.
Homochitto River System: Average.
Pascagoula River System: Average.
Northeast LA and Southeast AR: Average.
Tombigbee River System: Average.
Mississippi River: Average.

Mississippi River Plots December 2014
Plots Courtesy of the United States Army Corps of Engineers









Monthly Preliminary High and Low Stages:

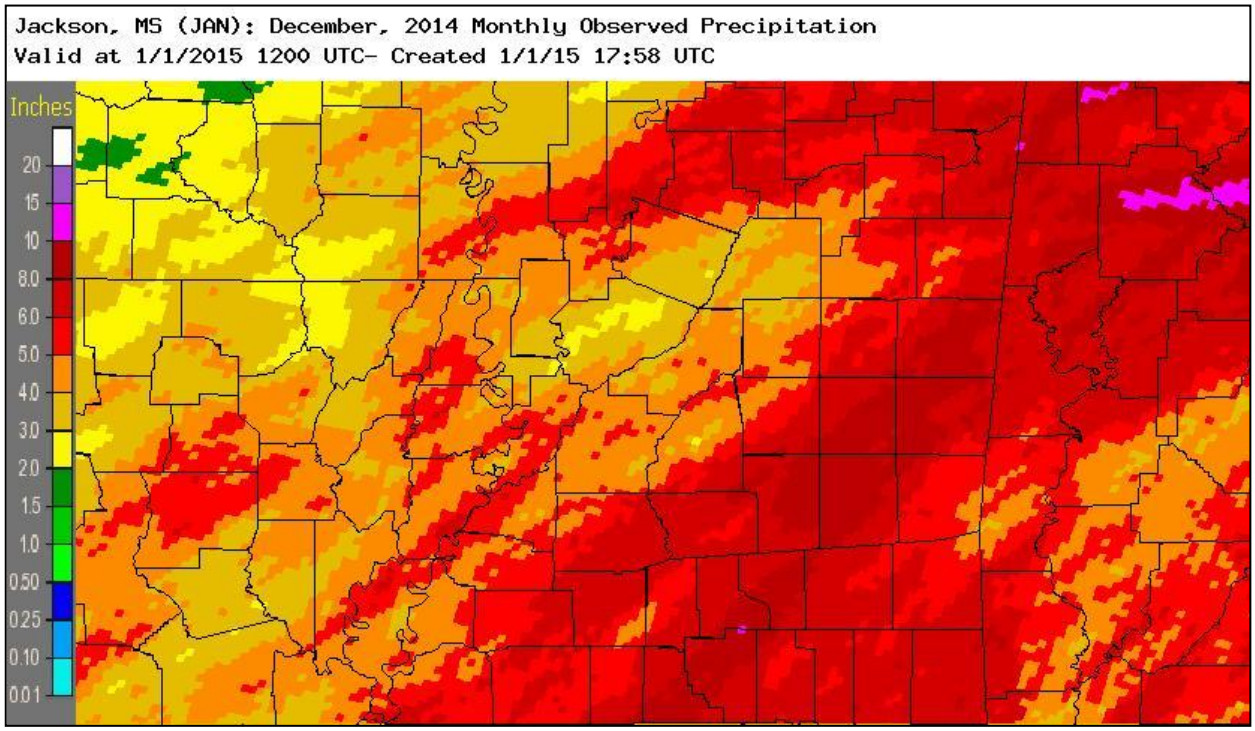
Location	Flood Stage (ft)	High Stage (ft)	Date	Low Stage (ft)	Date
Arkansas City	37	19.59	12/17	7.98	12/01
Greenville	48	30.57	12/17	18.18	12/01
Vicksburg	43	25.60	12/18	12.99	12/01
Natchez	48	32.02	12/19	19.84	12/01

Rainfall for the Month of December:

The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on November 30th until 7 am on December 31st were:

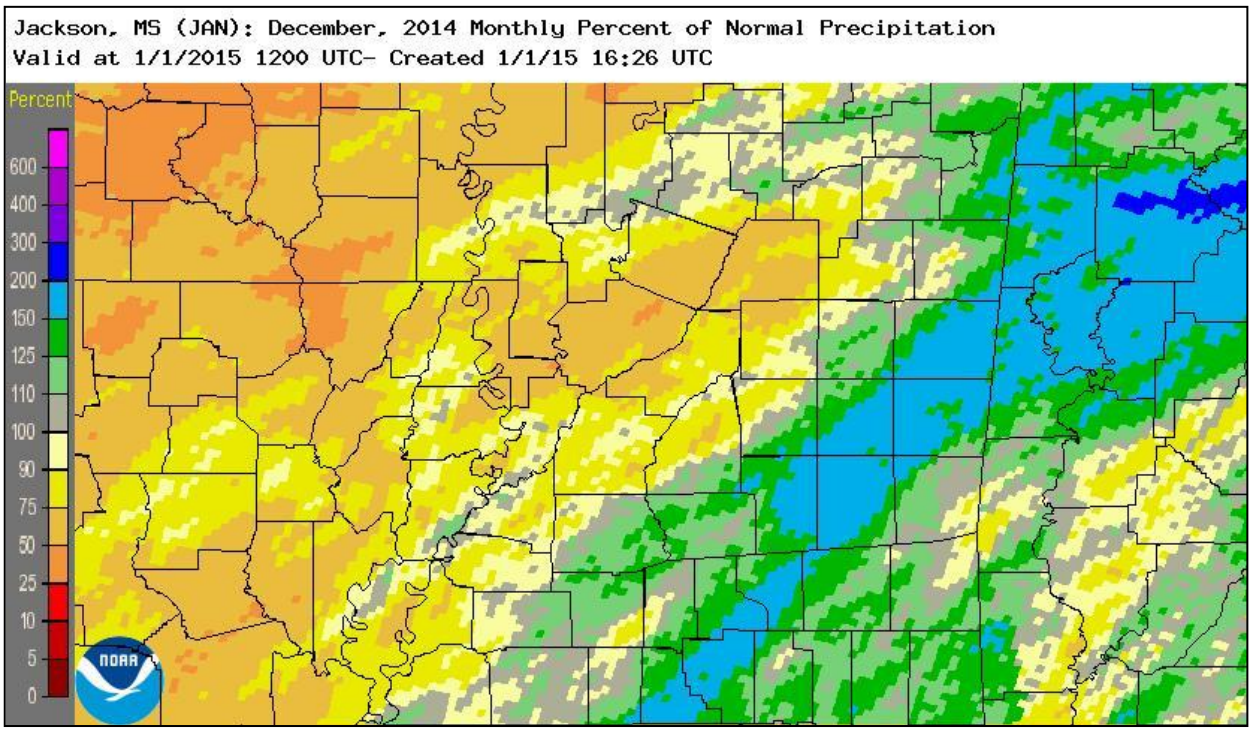
10.80 inches at Okatibbee Reservoir, MS; 9.80 inches at Pat Harrison Waterway's Turkey Creek Water Park, MS; 9.40 inches at Collins, MS; 9.00 inches at Newton Agricultural Exp Station, MS; 8.55 inches at Bay Springs, MS; 8.24 inches at Collinsville, MS; 8.15 inches at Topton, MS; and 8.11 inches at Mize, MS;

December Rainfall Estimates:



Note: Observer rainfall and MPE may differ due to time differences.

December Percent of Normal Precipitation:



Note: Observer rainfall and MPE may differ due to time differences.

December Rainfall for Selected Cities:

City (Airport)	Rainfall	Departure from Normal	2014 Rainfall	2014 Departure from Normal
Jackson (KJAN)	3.93	-1.22	56.19	+2.05
Meridian (KMEI)	8.68	+3.62	54.20	-1.96
Greenville (KGLH)	4.11	-1.51	53.03	+0.39
Greenwood (KGWO)	5.52	-0.13	56.12	+4.35
Hattiesburg (KHBG)	6.20	+1.29	52.31	-6.86
Vicksburg (KTVR)	4.59	-1.02	58.50	+3.76

Total River Flood Warning products issued: 3
Total River Flood Statement products issued: 4
Total River Flood Advisories MS River: 0
Daily Climate and Ag WX Products (AGO'S) issued: 31
Daily CoCoRaHS Rainfall Products (LCO'S) issued: 31
Daily River and Lake Summary Products (RVD'S) issued: 31

Marty V. Pope
Service Hydrologist
&
Anna Weber
Assistant Hydrologist/ Meteorologist-Intern

Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District